

CLAIMS

1. A rear and side panel assembly for a vehicle comprising a one-piece inner body panel member mated with a one-piece outer body panel member, said body panel members cooperating to at least partially define wheel well openings for opposing sides of the vehicle.

2. The rear and side panel assembly of claim 1, wherein the inner body panel member is formed from a first rigid sheet and the outer body panel member is formed from a second rigid sheet.

3. The rear and side panel assembly of claim 2, wherein said first and second sheets are aluminum.

4. The rear and side panel assembly of claim 1, wherein the inner body panel member and the outer body panel member are adapted for cooperation with a trunk lid.

5. The rear and side panel assembly of claim 1, wherein the inner body panel member and the outer body panel member define holes for at least one of trunk latches, wiring and trim components.

6. The rear and side panel assembly of claim 1, wherein the inner body panel member is characterized by formations configured to provide structural rigidity.

7. The rear and side panel assembly of claim 1, wherein at least one of the inner body panel member and outer body panel member is formed by quick plastic forming.

8. The rear and side panel assembly of claim 1, wherein at least one of the inner body panel member and the outer body panel member is formed by super plastic forming.

9. The rear and side panel assembly of claim 1, wherein at least one of the inner body panel member and the outer body panel member is formed by sheet hydroforming.

10. The rear and side panel assembly of claim 1, wherein the inner body panel member and the outer body panel member are joined at least partially by hemming.

11. The rear and side panel assembly of claim 1, wherein the inner body panel member and the outer body panel member are joined at least partially by welding.

12. The rear and side panel assembly of claim 1, wherein the inner body panel member and the outer body panel member are joined at least partially by bonding.

13. The rear and side panel assembly of claim 1, wherein the inner body panel member and the outer body panel member are aluminum.

14. The rear and side panel assembly of claim 1, wherein the inner body panel member has an outer face and the inner body panel member and the outer body panel member are sufficiently contiguous and coextensive with each other such that the outer body panel member substantially covers the outer face of the inner body panel member.

15. The rear and side panel assembly of claim 1, wherein said inner body panel member includes an inner rear panel portion having opposite ends, a first inner side panel portion at one end and a second inner side panel portion at the opposed end, wherein the said inner side panel portions extend generally frontward from the
5 inner rear panel portion;

wherein said outer body panel member includes an outer rear panel portion having opposite ends, a first outer side panel portion at one end and a second outer side panel portion at the opposed end, wherein the outer side panel portions
10 extend generally frontward from the outer rear panel portion; and

wherein the inner and the outer body panel members are joined as an assembly.

16. The rear and side panel assembly of claim 15, wherein each of the side panel portions on the joined inner and outer body panel members define an edge that is configured to complement and further define a wheel well opening on a vehicle, and wherein each of the side panel portions is configured to extend frontward
5 such that it is mountable to a body lock pillar on the vehicle.

17. The rear and side panel assembly of claim 15, wherein each of the inner body panel member and the outer body panel member is integral.

18. A rear and side panel assembly for a vehicle body comprising:
an integral inner body panel member including an inner rear panel portion having opposite ends, a first inner side panel portion at one end and a second

5 inner side panel portion at the opposed end, wherein said inner side panel portions extend generally forward from the inner rear panel portion; and

10 an integral outer body panel member matable with the inner body panel member including an outer rear panel portion having opposite ends, a first outer side panel portion at one end and a second outer side panel portion at the opposed end, wherein said outer side panel portions extend generally forward from the outer rear panel portion;

15 wherein the inner and the outer body panel members are joined as an assembly.

19. A method of assembling a vehicle, the method comprising:

forming a one-piece inner body panel member;

5 forming a one-piece outer body panel member matable with the inner member; and

10 mounting the inner and outer body panel members to each other such that the members at least partially define wheel well openings at opposing sides of the vehicle.

20. The method of assembling a vehicle of claim 19, wherein the inner body panel member includes an inner rear panel portion having opposite ends, a first inner side panel portion at one end and a second inner side panel portion at the opposed end, and wherein said forming is by a method selected from the group consisting of quick plastic forming, super plastic forming and hydroforming;

wherein the outer body panel member includes an outer rear panel portion having opposite ends, a first outer side panel portion at one end and a second outer side panel portion at the opposed end, and wherein said forming is by a method selected from the group consisting of quick plastic forming, super plastic forming and hydroforming; and

further comprising:

bending the inner body panel member such that the inner side panel portions extend generally frontward from the inner rear panel portion; and

bending the outer body panel member such that the outer side panel portions extend generally frontward from the outer rear panel portion.

21. The method of claim 19, wherein said mounting is such that the outer body panel member substantially covers the inner body panel member and the inner body panel member and the outer body panel member are joined as an assembly.

22. The method of claim 19, further including trimming the inner body panel member.

23. The method of claim 19, further including trimming the outer body panel member.

24. The method of claim 19, further including modifying the inner body panel member such that it defines holes for at least one of trunk latches, wiring and trim components.

25. The method of claim 19, further including modifying the outer body panel member such that it defines holes for at least one of trunk latches, wiring and trim components.

26. The method of claim 19, further including mounting the joined inner and outer body panels to a vehicle frame to at least partially form a vehicle body.

27. The method of claim 26, wherein said mounting is at body lock pillars.

28. The method of claim 26, wherein the thus mounted, joined inner and outer body panels at least partially define a vehicle trunk compartment.

29. The method of claim 26, wherein the thus mounted, joined inner and outer body panels at least partially define wheel well openings at opposing sides of the vehicle.

30. The method of claim 19, further including:

providing a rear and side panel assembly for a vehicle, wherein the rear and side panel assembly includes a one-piece inner body panel member and a one-piece
5 outer body panel member, and wherein said inner and outer body panel members at least partially define wheel well openings at opposing sides of the vehicle.